

5.6 Conducted Emission

5.6.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.6.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX A.

5.6.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.6.4 Test Result

Note ¹: The EUT was tested in charging mode.

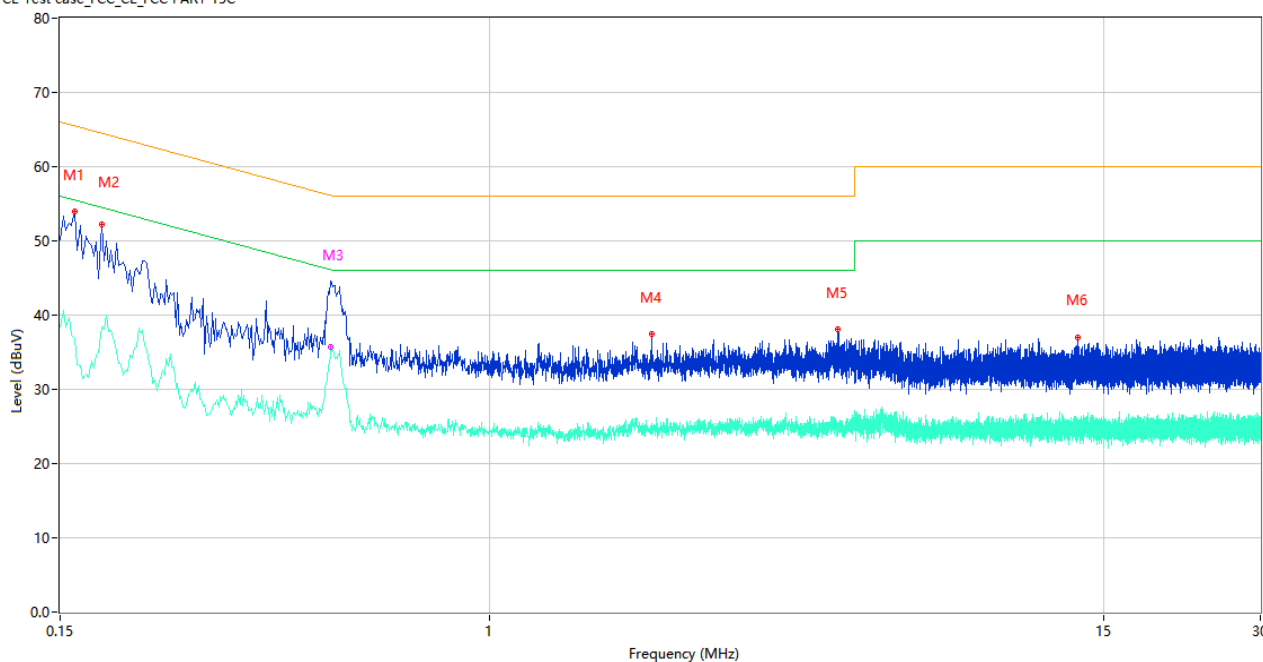
Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note ³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

PHASE L

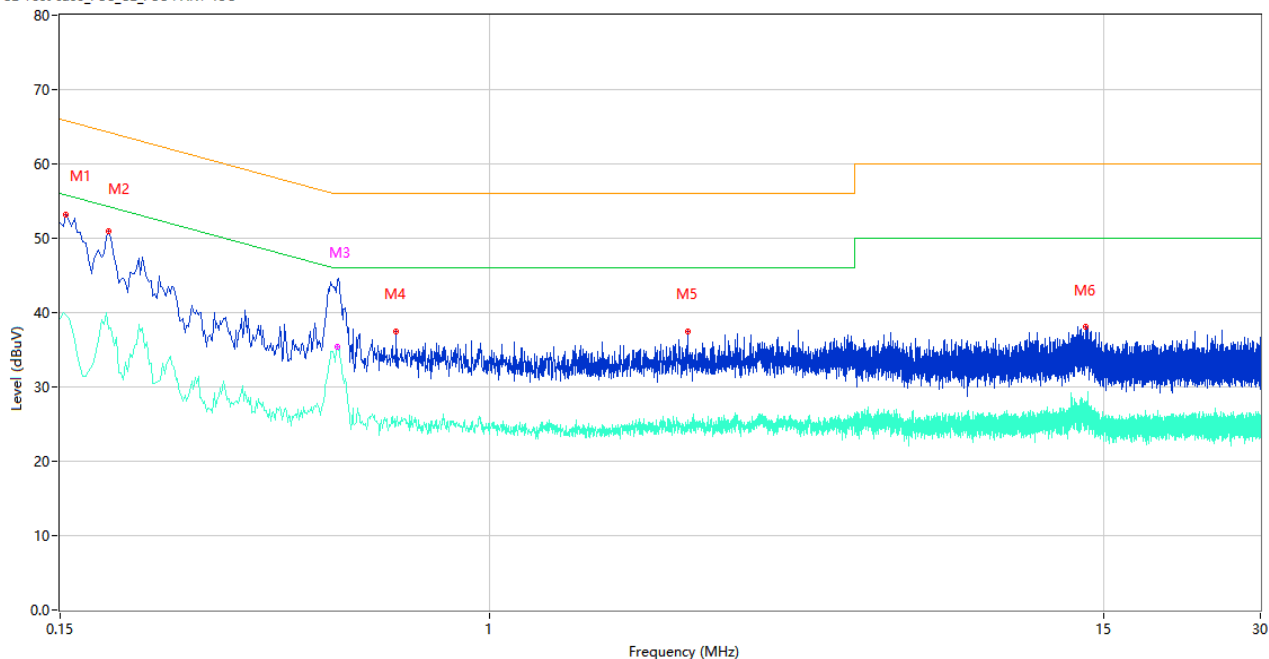
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.160	53.94	9.78	65.46	11.52	Peak	L	Pass
1**	0.160	36.90	9.78	55.46	18.56	AV	L	Pass
2	0.180	52.22	9.78	64.49	12.27	Peak	L	Pass
2**	0.180	38.39	9.78	54.49	16.10	AV	L	Pass
3	0.496	44.46	9.98	56.07	11.61	Peak	L	Pass
3**	0.496	35.65	9.98	46.07	10.42	AV	L	Pass
4	2.040	37.43	10.45	56.00	18.57	Peak	L	Pass
4**	2.040	25.27	10.45	46.00	20.73	AV	L	Pass
5	4.652	38.06	10.22	56.00	17.94	Peak	L	Pass
5**	4.652	25.43	10.22	46.00	20.57	AV	L	Pass
6	13.394	36.99	10.57	60.00	23.01	Peak	L	Pass
6**	13.394	25.47	10.57	50.00	24.53	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.154	53.10	9.78	65.78	12.68	Peak	N	Pass
1**	0.154	39.76	9.78	55.78	16.02	AV	N	Pass
2	0.186	51.01	9.78	64.21	13.20	Peak	N	Pass
2**	0.186	37.74	9.78	54.21	16.47	AV	N	Pass
3	0.510	44.24	9.99	56.00	11.76	Peak	N	Pass
3**	0.510	35.47	9.99	46.00	10.53	AV	N	Pass
4	0.662	37.52	10.32	56.00	18.48	Peak	N	Pass
4**	0.662	24.99	10.32	46.00	21.01	AV	N	Pass
5	2.392	37.51	10.27	56.00	18.49	Peak	N	Pass
5**	2.392	25.56	10.27	46.00	20.44	AV	N	Pass
6	13.880	38.09	10.52	60.00	21.91	Peak	N	Pass
6**	13.880	28.01	10.52	50.00	21.99	AV	N	Pass

5.7 Radiated Spurious Emission

5.7.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.7.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

5.7.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- f) Compare the resultant electric field strength level to the applicable limit.
- g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 1.
- b) VBW $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be

longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle, x , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.
 - 2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.
 - 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.7.4 Test Result

Note 1: The symbol of "--" in the table which means not application.

Note 2: For the test data above 1 GHz, According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

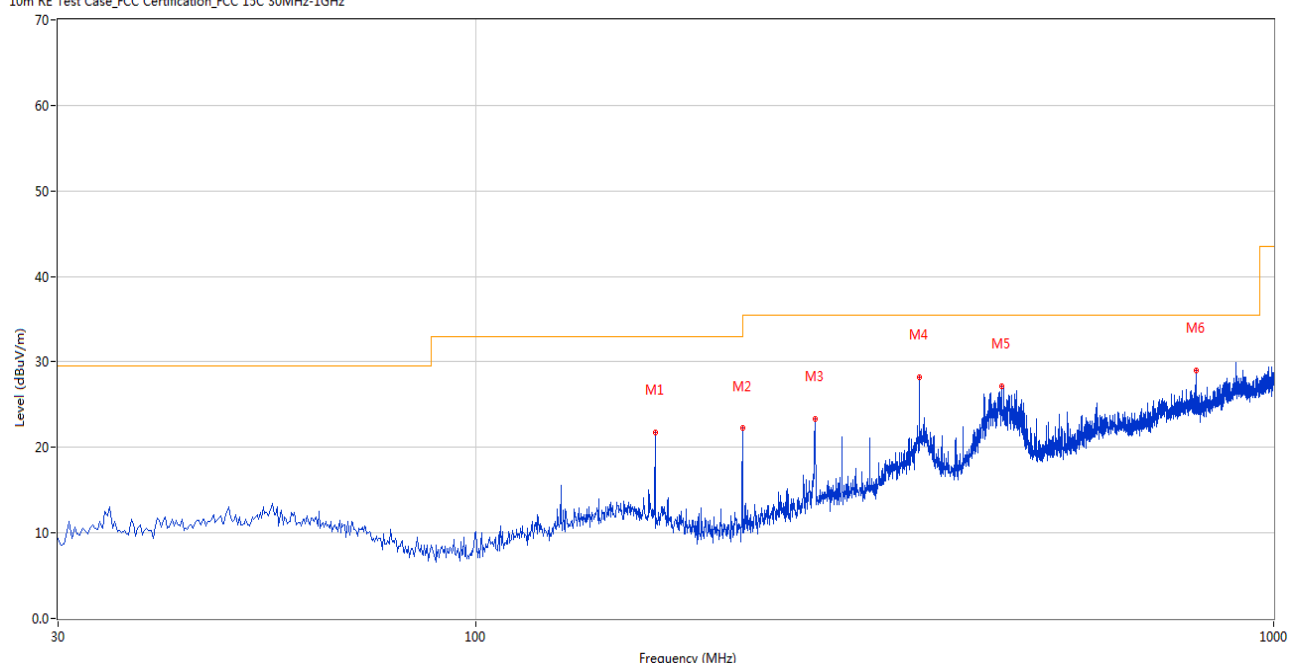
Note 3: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note 4: The EUT was tested in Link mode and the charging.

Test Data and Plots

30 MHz to 1 GHz, ANT H

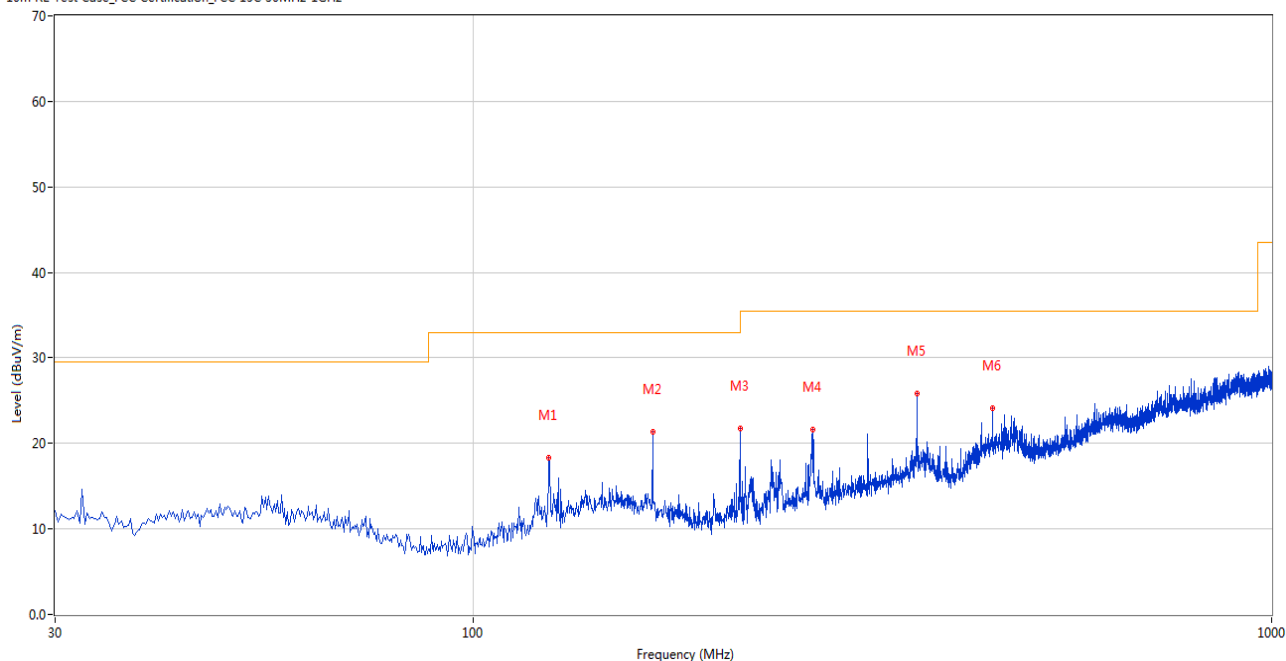
10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	167.948	21.81	-25.97	33.0	11.19	Peak	91.00	200	Horizontal	Pass
2	215.951	22.21	-28.88	33.0	10.79	Peak	243.00	200	Horizontal	Pass
3	266.136	23.35	-26.32	35.5	12.15	Peak	253.00	200	Horizontal	Pass
4	359.960	28.26	-23.29	35.5	7.24	Peak	350.00	200	Horizontal	Pass
5	455.966	27.18	-20.50	35.5	8.32	Peak	118.00	200	Horizontal	Pass
6	798.775	28.99	-12.98	35.5	6.51	Peak	26.00	100	Horizontal	Pass
6*	959.987	30.63	-10.77	35.5	4.87	QP	142.00	110	Horizontal	Pass

30 MHz to 1 GHz, ANT V

10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	124.551	18.33	-27.82	33.0	14.67	Peak	27.00	100	Vertical	Pass
2	167.948	21.37	-25.97	33.0	11.63	Peak	115.00	100	Vertical	Pass
3	215.951	21.72	-28.88	33.0	11.28	Peak	120.00	100	Vertical	Pass
4	266.621	21.66	-26.20	35.5	13.84	Peak	312.00	100	Vertical	Pass
5	359.960	25.79	-23.29	35.5	9.71	Peak	0.00	200	Vertical	Pass
6	446.996	24.10	-20.61	35.5	11.40	Peak	22.00	100	Vertical	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious above 18G is noise only, do not show on the report.

1 GHz to 18 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.500	50.10	74.0	23.90	Peak	31.00	100	Horizontal	Pass
1**	1440.500	37.49	54.0	16.51	AV	31.00	100	Horizontal	Pass
2	2413.400	95.81	74.0	-21.81	Peak	18.00	100	Horizontal	N/A
2**	2413.400	92.84	54.0	-38.84	AV	18.00	100	Horizontal	N/A
3	5054.600	52.51	74.0	21.49	Peak	63.00	150	Horizontal	Pass
3**	5054.600	42.75	54.0	11.25	AV	63.00	150	Horizontal	Pass
4	6991.400	56.90	74.0	17.10	Peak	334.00	400	Horizontal	Pass
4**	6991.400	47.00	54.0	7.00	AV	334.00	400	Horizontal	Pass
5	11942.125	51.41	74.0	22.59	Peak	329.00	300	Horizontal	Pass
5**	11942.125	42.12	54.0	11.88	AV	329.00	300	Horizontal	Pass
6	17469.489	54.77	74.0	19.23	Peak	360.00	300	Horizontal	Pass
6**	17469.489	45.93	54.0	8.07	AV	360.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.400	44.87	74.0	29.13	Peak	182.00	300	Vertical	Pass
1**	1441.400	33.22	54.0	20.78	AV	182.00	300	Vertical	Pass
2	2413.700	107.28	74.0	-33.28	Peak	128.00	100	Vertical	N/A
2**	2413.700	104.25	54.0	-50.25	AV	128.00	100	Vertical	N/A
3	5327.000	53.95	74.0	20.05	Peak	88.00	150	Vertical	Pass
3**	5327.000	46.44	54.0	7.56	AV	88.00	150	Vertical	Pass
4	6991.000	55.36	74.0	18.64	Peak	0.00	200	Vertical	Pass
4**	6991.000	46.60	54.0	7.40	AV	0.00	200	Vertical	Pass
5	11943.850	51.55	74.0	22.45	Peak	263.00	300	Vertical	Pass
5**	11943.850	42.07	54.0	11.93	AV	263.00	300	Vertical	Pass
6	17346.636	54.95	74.0	19.05	Peak	0.00	400	Vertical	Pass
6**	17346.636	45.22	54.0	8.78	AV	0.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.600	51.94	74.0	22.06	Peak	22.00	100	Horizontal	Pass
1**	1441.600	36.19	54.0	17.81	AV	22.00	100	Horizontal	Pass
2	2435.600	95.30	74.0	-21.30	Peak	354.00	200	Horizontal	N/A
2**	2435.600	92.39	54.0	-38.39	AV	354.00	200	Horizontal	N/A
3	4965.800	51.38	74.0	22.62	Peak	134.00	100	Horizontal	Pass
3**	4965.800	42.87	54.0	11.13	AV	134.00	100	Horizontal	Pass
4	6977.200	56.13	74.0	17.87	Peak	30.00	400	Horizontal	Pass
4**	6977.200	46.18	54.0	7.82	AV	30.00	400	Horizontal	Pass
5	12848.175	51.69	74.0	22.31	Peak	248.00	300	Horizontal	Pass
5**	12848.175	42.60	54.0	11.40	AV	248.00	300	Horizontal	Pass
6	16092.675	54.78	74.0	19.22	Peak	114.00	400	Horizontal	Pass
6**	16092.675	44.90	54.0	9.10	AV	114.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.400	43.76	74.0	30.24	Peak	158.00	200	Vertical	Pass
1**	1441.400	32.31	54.0	21.69	AV	158.00	200	Vertical	Pass
2	2435.400	105.84	74.0	-31.84	Peak	342.00	200	Vertical	N/A
2**	2435.400	102.94	54.0	-48.94	AV	342.00	200	Vertical	N/A
3	4973.400	52.41	74.0	21.59	Peak	144.00	100	Vertical	Pass
3**	4973.400	42.37	54.0	11.63	AV	144.00	100	Vertical	Pass
4	6992.200	55.72	74.0	18.28	Peak	155.00	200	Vertical	Pass
4**	6992.200	47.33	54.0	6.67	AV	155.00	200	Vertical	Pass
5	12612.862	51.81	74.0	22.19	Peak	94.00	200	Vertical	Pass
5**	12612.862	42.81	54.0	11.19	AV	94.00	200	Vertical	Pass
6	17478.150	54.64	74.0	19.36	Peak	15.00	300	Vertical	Pass
6**	17478.150	45.18	54.0	8.82	AV	15.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.200	50.00	74.0	24.00	Peak	23.00	100	Horizontal	Pass
1**	1439.200	36.89	54.0	17.11	AV	23.00	100	Horizontal	Pass
2	2463.400	94.87	74.0	-20.87	Peak	360.00	200	Horizontal	N/A
2**	2463.400	91.98	54.0	-37.98	AV	360.00	200	Horizontal	N/A
3	4980.000	51.47	74.0	22.53	Peak	266.00	200	Horizontal	Pass
3**	4980.000	42.88	54.0	11.12	AV	266.00	200	Horizontal	Pass
4	6991.600	55.52	74.0	18.48	Peak	52.00	300	Horizontal	Pass
4**	6991.600	46.19	54.0	7.81	AV	52.00	300	Horizontal	Pass
5	12996.750	51.26	74.0	22.74	Peak	133.00	200	Horizontal	Pass
5**	12996.750	41.32	54.0	12.68	AV	133.00	200	Horizontal	Pass
6	17484.974	55.14	74.0	18.86	Peak	212.00	300	Horizontal	Pass
6**	17484.974	45.00	54.0	9.00	AV	212.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.400	46.32	74.0	27.68	Peak	0.00	300	Vertical	Pass
1**	1440.400	36.04	54.0	17.96	AV	0.00	300	Vertical	Pass
2	2463.500	106.24	74.0	-32.24	Peak	80.00	100	Vertical	N/A
2**	2463.500	103.30	54.0	-49.30	AV	80.00	100	Vertical	N/A
3	4981.800	52.13	74.0	21.87	Peak	21.00	150	Vertical	Pass
3**	4981.800	42.62	54.0	11.38	AV	21.00	150	Vertical	Pass
4	6990.000	55.74	74.0	18.26	Peak	9.00	400	Vertical	Pass
4**	6990.000	47.37	54.0	6.63	AV	9.00	400	Vertical	Pass
5	12575.200	51.37	74.0	22.63	Peak	263.00	100	Vertical	Pass
5**	12575.200	42.22	54.0	11.78	AV	263.00	100	Vertical	Pass
6	17433.786	54.38	74.0	19.62	Peak	230.00	300	Vertical	Pass
6**	17433.786	45.42	54.0	8.58	AV	230.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.100	50.02	74.0	23.98	Peak	23.00	400	Horizontal	Pass
1**	1441.100	35.74	54.0	18.26	AV	23.00	400	Horizontal	Pass
2	2413.600	98.69	74.0	-24.69	Peak	360.00	200	Horizontal	N/A
2**	2413.600	91.50	54.0	-37.50	AV	360.00	200	Horizontal	N/A
3	4985.800	52.02	74.0	21.98	Peak	198.00	150	Horizontal	Pass
3**	4985.800	42.87	54.0	11.13	AV	198.00	150	Horizontal	Pass
4	6986.800	55.75	74.0	18.25	Peak	198.00	400	Horizontal	Pass
4**	6986.800	48.01	54.0	5.99	AV	198.00	400	Horizontal	Pass
5	12959.475	51.18	74.0	22.82	Peak	193.00	200	Horizontal	Pass
5**	12959.475	41.59	54.0	12.41	AV	193.00	200	Horizontal	Pass
6	17317.761	54.93	74.0	19.07	Peak	35.00	300	Horizontal	Pass
6**	17317.761	44.24	54.0	9.76	AV	35.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.300	44.28	74.0	29.72	Peak	356.00	400	Vertical	Pass
1**	1439.300	32.99	54.0	21.01	AV	356.00	400	Vertical	Pass
2	2410.400	110.13	74.0	-36.13	Peak	322.00	150	Vertical	N/A
2**	2410.400	102.44	54.0	-48.44	AV	322.00	150	Vertical	N/A
3	4970.800	51.50	74.0	22.50	Peak	89.00	200	Vertical	Pass
3**	4970.800	43.13	54.0	10.87	AV	89.00	200	Vertical	Pass
4	6622.000	55.32	74.0	18.68	Peak	360.00	200	Vertical	Pass
4**	6622.000	46.46	54.0	7.54	AV	360.00	200	Vertical	Pass
5	12847.388	51.90	74.0	22.10	Peak	360.00	300	Vertical	Pass
5**	12847.388	41.93	54.0	12.07	AV	360.00	300	Vertical	Pass
6	17460.824	55.07	74.0	18.93	Peak	238.00	100	Vertical	Pass
6**	17460.824	45.76	54.0	8.24	AV	238.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.000	50.01	74.0	23.99	Peak	20.00	200	Horizontal	Pass
1**	1440.000	37.83	54.0	16.17	AV	20.00	200	Horizontal	Pass
2	2438.200	98.78	74.0	-24.78	Peak	360.00	150	Horizontal	N/A
2**	2438.200	91.44	54.0	-37.44	AV	360.00	150	Horizontal	N/A
3	4971.000	51.23	74.0	22.77	Peak	248.00	100	Horizontal	Pass
3**	4971.000	42.59	54.0	11.41	AV	248.00	100	Horizontal	Pass
4	6989.800	55.55	74.0	18.45	Peak	10.00	400	Horizontal	Pass
4**	6989.800	47.13	54.0	6.87	AV	10.00	400	Horizontal	Pass
5	11363.675	51.92	74.0	22.08	Peak	142.00	200	Horizontal	Pass
5**	11363.675	42.81	54.0	11.19	AV	142.00	200	Horizontal	Pass
6	17878.462	55.09	74.0	18.91	Peak	75.00	150	Horizontal	Pass
6**	17878.462	45.28	54.0	8.72	AV	75.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1435.100	44.54	74.0	29.46	Peak	197.00	300	Vertical	Pass
1**	1435.100	32.44	54.0	21.56	AV	197.00	300	Vertical	Pass
2	2435.400	109.18	74.0	-35.18	Peak	360.00	200	Vertical	N/A
2**	2435.400	102.23	54.0	-48.23	AV	360.00	200	Vertical	N/A
3	4973.600	51.53	74.0	22.47	Peak	87.00	150	Vertical	Pass
3**	4973.600	43.20	54.0	10.80	AV	87.00	150	Vertical	Pass
4	6981.200	56.61	74.0	17.39	Peak	0.00	400	Vertical	Pass
4**	6981.200	46.41	54.0	7.59	AV	0.00	400	Vertical	Pass
5	13031.137	51.76	74.0	22.24	Peak	210.00	150	Vertical	Pass
5**	13031.137	42.16	54.0	11.84	AV	210.00	150	Vertical	Pass
6	17424.337	54.83	74.0	19.17	Peak	309.00	100	Vertical	Pass
6**	17424.337	45.64	54.0	8.36	AV	309.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.300	50.72	74.0	23.28	Peak	24.00	300	Horizontal	Pass
1**	1440.300	37.30	54.0	16.70	AV	24.00	300	Horizontal	Pass
2	2463.400	97.64	74.0	-23.64	Peak	360.00	200	Horizontal	N/A
2**	2463.400	90.13	54.0	-36.13	AV	360.00	200	Horizontal	N/A
3	4978.400	51.36	74.0	22.64	Peak	133.00	100	Horizontal	Pass
3**	4978.400	43.13	54.0	10.87	AV	133.00	100	Horizontal	Pass
4	6978.800	55.07	74.0	18.93	Peak	7.00	400	Horizontal	Pass
4**	6978.800	46.94	54.0	7.06	AV	7.00	400	Horizontal	Pass
5	11322.563	52.92	74.0	21.08	Peak	160.00	300	Horizontal	Pass
5**	11322.563	41.48	54.0	12.52	AV	160.00	300	Horizontal	Pass
6	17375.513	54.63	74.0	19.37	Peak	93.00	300	Horizontal	Pass
6**	17375.513	45.23	54.0	8.77	AV	93.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.700	44.28	74.0	29.72	Peak	168.00	300	Vertical	Pass
1**	1440.700	32.79	54.0	21.21	AV	168.00	300	Vertical	Pass
2	2465.900	109.21	74.0	-35.21	Peak	75.00	150	Vertical	N/A
2**	2465.900	101.76	54.0	-47.76	AV	75.00	150	Vertical	N/A
3	4979.000	51.53	74.0	22.47	Peak	208.00	200	Vertical	Pass
3**	4979.000	42.62	54.0	11.38	AV	208.00	200	Vertical	Pass
4	6987.800	55.26	74.0	18.74	Peak	19.00	400	Vertical	Pass
4**	6987.800	47.62	54.0	6.38	AV	19.00	400	Vertical	Pass
5	12720.099	51.58	74.0	22.42	Peak	159.00	300	Vertical	Pass
5**	12720.099	41.30	54.0	12.70	AV	159.00	300	Vertical	Pass
6	17475.000	55.21	74.0	18.79	Peak	230.00	100	Vertical	Pass
6**	17475.000	45.14	54.0	8.86	AV	230.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.800	50.19	74.0	23.81	Peak	25.00	200	Horizontal	Pass
1**	1441.800	37.96	54.0	16.04	AV	25.00	200	Horizontal	Pass
2	2413.100	98.76	74.0	-24.76	Peak	0.00	200	Horizontal	N/A
2**	2413.100	91.45	54.0	-37.45	AV	0.00	200	Horizontal	N/A
3	4978.400	51.76	74.0	22.24	Peak	54.00	100	Horizontal	Pass
3**	4978.400	43.69	54.0	10.31	AV	54.00	100	Horizontal	Pass
4	6988.600	55.25	74.0	18.75	Peak	54.00	400	Horizontal	Pass
4**	6988.600	46.54	54.0	7.46	AV	54.00	400	Horizontal	Pass
5	12519.425	51.13	74.0	22.87	Peak	109.00	400	Horizontal	Pass
5**	12519.425	41.58	54.0	12.42	AV	109.00	400	Horizontal	Pass
6	16898.025	54.65	74.0	19.35	Peak	73.00	100	Horizontal	Pass
6**	16898.025	44.63	54.0	9.37	AV	73.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.300	45.03	74.0	28.97	Peak	168.00	100	Vertical	Pass
1**	1442.300	34.65	54.0	19.35	AV	168.00	100	Vertical	Pass
2	2411.000	109.69	74.0	-35.69	Peak	134.00	100	Vertical	N/A
2**	2411.000	102.38	54.0	-48.38	AV	134.00	100	Vertical	N/A
3	4807.600	51.59	74.0	22.41	Peak	100.00	200	Vertical	Pass
3**	4807.600	42.64	54.0	11.36	AV	100.00	200	Vertical	Pass
4	6990.600	55.41	74.0	18.59	Peak	181.00	400	Vertical	Pass
4**	6990.600	46.99	54.0	7.01	AV	181.00	400	Vertical	Pass
5	11942.700	52.04	74.0	21.96	Peak	0.00	300	Vertical	Pass
5**	11942.700	42.32	54.0	11.68	AV	0.00	300	Vertical	Pass
6	17440.874	54.64	74.0	19.36	Peak	248.00	200	Vertical	Pass
6**	17440.874	45.23	54.0	8.77	AV	248.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.400	50.90	74.0	23.10	Peak	41.00	300	Horizontal	Pass
1**	1441.400	36.42	54.0	17.58	AV	41.00	300	Horizontal	Pass
2	2435.500	99.37	74.0	-25.37	Peak	360.00	200	Horizontal	N/A
2**	2435.500	91.22	54.0	-37.22	AV	360.00	200	Horizontal	N/A
3	4987.200	51.45	74.0	22.55	Peak	0.00	100	Horizontal	Pass
3**	4987.200	42.52	54.0	11.48	AV	0.00	100	Horizontal	Pass
4	6988.000	55.04	74.0	18.96	Peak	8.00	300	Horizontal	Pass
4**	6988.000	46.82	54.0	7.18	AV	8.00	300	Horizontal	Pass
5	12573.475	51.51	74.0	22.49	Peak	179.00	200	Horizontal	Pass
5**	12573.475	41.81	54.0	12.19	AV	179.00	200	Horizontal	Pass
6	17421.713	54.62	74.0	19.38	Peak	192.00	100	Horizontal	Pass
6**	17421.713	46.12	54.0	7.88	AV	192.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.000	45.15	74.0	28.85	Peak	165.00	100	Vertical	Pass
1**	1442.000	33.64	54.0	20.36	AV	165.00	100	Vertical	Pass
2	2438.300	108.64	74.0	-34.64	Peak	346.00	200	Vertical	N/A
2**	2438.300	101.47	54.0	-47.47	AV	346.00	200	Vertical	N/A
3	5323.600	55.15	74.0	18.85	Peak	109.00	150	Vertical	Pass
3**	5323.600	44.05	54.0	9.95	AV	109.00	150	Vertical	Pass
4	6978.800	55.75	74.0	18.25	Peak	166.00	400	Vertical	Pass
4**	6978.800	46.95	54.0	7.05	AV	166.00	400	Vertical	Pass
5	11786.299	52.05	74.0	21.95	Peak	294.00	200	Vertical	Pass
5**	11786.299	41.87	54.0	12.13	AV	294.00	200	Vertical	Pass
6	16076.401	54.61	74.0	19.39	Peak	35.00	400	Vertical	Pass
6**	16076.401	45.35	54.0	8.65	AV	35.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1438.700	50.56	74.0	23.44	Peak	25.00	200	Horizontal	Pass
1**	1438.700	36.33	54.0	17.67	AV	25.00	200	Horizontal	Pass
2	2460.400	97.84	74.0	-23.84	Peak	360.00	150	Horizontal	N/A
2**	2460.400	90.60	54.0	-36.60	AV	360.00	150	Horizontal	N/A
3	4981.800	51.27	74.0	22.73	Peak	131.00	200	Horizontal	Pass
3**	4981.800	43.33	54.0	10.67	AV	131.00	200	Horizontal	Pass
4	6990.800	55.79	74.0	18.21	Peak	52.00	400	Horizontal	Pass
4**	6990.800	46.99	54.0	7.01	AV	52.00	400	Horizontal	Pass
5	10351.674	51.67	74.0	22.33	Peak	141.00	200	Horizontal	Pass
5**	10351.674	40.81	54.0	13.19	AV	141.00	200	Horizontal	Pass
6	17458.463	54.80	74.0	19.20	Peak	94.00	300	Horizontal	Pass
6**	17458.463	46.13	54.0	7.87	AV	94.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.200	44.50	74.0	29.50	Peak	165.00	100	Vertical	Pass
1**	1440.200	32.75	54.0	21.25	AV	165.00	100	Vertical	Pass
2	2462.400	108.51	74.0	-34.51	Peak	140.00	200	Vertical	N/A
2**	2462.400	100.83	54.0	-46.83	AV	140.00	200	Vertical	N/A
3	4980.600	51.57	74.0	22.43	Peak	261.00	150	Vertical	Pass
3**	4980.600	42.72	54.0	11.28	AV	261.00	150	Vertical	Pass
4	6989.800	55.98	74.0	18.02	Peak	89.00	100	Vertical	Pass
4**	6989.800	47.42	54.0	6.58	AV	89.00	100	Vertical	Pass
5	10913.162	51.40	74.0	22.60	Peak	214.00	400	Vertical	Pass
5**	10913.162	42.43	54.0	11.57	AV	214.00	400	Vertical	Pass
6	17440.874	54.77	74.0	19.23	Peak	294.00	150	Vertical	Pass
6**	17440.874	45.45	54.0	8.55	AV	294.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.300	46.08	74.0	27.92	Peak	36.00	400	Horizontal	Pass
1**	1442.300	34.74	54.0	19.26	AV	36.00	400	Horizontal	Pass
2	2419.400	96.01	74.0	-22.01	Peak	36.00	200	Horizontal	N/A
2**	2419.400	88.14	54.0	-34.14	AV	36.00	200	Horizontal	N/A
3	4985.600	51.96	74.0	22.04	Peak	323.00	200	Horizontal	Pass
3**	4985.600	42.63	54.0	11.37	AV	323.00	200	Horizontal	Pass
4	6984.400	55.76	74.0	18.24	Peak	312.00	100	Horizontal	Pass
4**	6984.400	46.68	54.0	7.32	AV	312.00	100	Horizontal	Pass
5	12576.062	51.55	74.0	22.45	Peak	145.00	100	Horizontal	Pass
5**	12576.062	42.40	54.0	11.60	AV	145.00	100	Horizontal	Pass
6	17471.588	55.38	74.0	18.62	Peak	348.00	300	Horizontal	Pass
6**	17471.588	46.49	54.0	7.51	AV	348.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.000	44.01	74.0	29.99	Peak	175.00	300	Vertical	Pass
1**	1331.000	33.83	54.0	20.17	AV	175.00	300	Vertical	Pass
2	2424.800	106.86	74.0	-32.86	Peak	115.00	100	Vertical	N/A
2**	2424.800	97.93	54.0	-43.93	AV	115.00	100	Vertical	N/A
3	5324.000	54.89	74.0	19.11	Peak	110.00	150	Vertical	Pass
3**	5324.000	45.88	54.0	8.12	AV	110.00	150	Vertical	Pass
4	6974.400	55.29	74.0	18.71	Peak	9.00	100	Vertical	Pass
4**	6974.400	46.54	54.0	7.46	AV	9.00	100	Vertical	Pass
5	12963.937	51.44	74.0	22.56	Peak	268.00	200	Vertical	Pass
5**	12963.937	41.49	54.0	12.51	AV	268.00	200	Vertical	Pass
6	17458.463	55.30	74.0	18.70	Peak	36.00	400	Vertical	Pass
6**	17458.463	45.84	54.0	8.16	AV	36.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.600	46.02	74.0	27.98	Peak	17.00	300	Horizontal	Pass
1**	1442.600	35.48	54.0	18.52	AV	17.00	300	Horizontal	Pass
2	2434.300	96.08	74.0	-22.08	Peak	360.00	200	Horizontal	N/A
2**	2434.300	88.21	54.0	-34.21	AV	360.00	200	Horizontal	N/A
3	4972.400	52.21	74.0	21.79	Peak	220.00	150	Horizontal	Pass
3**	4972.400	43.19	54.0	10.81	AV	220.00	150	Horizontal	Pass
4	6990.400	55.92	74.0	18.08	Peak	320.00	300	Horizontal	Pass
4**	6990.400	46.44	54.0	7.56	AV	320.00	300	Horizontal	Pass
5	11929.187	51.75	74.0	22.25	Peak	230.00	100	Horizontal	Pass
5**	11929.187	41.75	54.0	12.25	AV	230.00	100	Horizontal	Pass
6	17418.037	55.19	74.0	18.81	Peak	193.00	400	Horizontal	Pass
6**	17418.037	45.47	54.0	8.53	AV	193.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.200	42.30	74.0	31.70	Peak	148.00	200	Vertical	Pass
1**	1328.200	32.53	54.0	21.47	AV	148.00	200	Vertical	Pass
2	2439.400	107.14	74.0	-33.14	Peak	129.00	200	Vertical	N/A
2**	2439.400	97.92	54.0	-43.92	AV	129.00	200	Vertical	N/A
3	5327.000	55.53	74.0	18.47	Peak	98.00	150	Vertical	Pass
3**	5327.000	46.92	54.0	7.08	AV	98.00	150	Vertical	Pass
4	6995.200	55.93	74.0	18.07	Peak	325.00	300	Vertical	Pass
4**	6995.200	46.40	54.0	7.60	AV	325.00	300	Vertical	Pass
5	12606.537	51.76	74.0	22.24	Peak	0.00	200	Vertical	Pass
5**	12606.537	41.99	54.0	12.01	AV	0.00	200	Vertical	Pass
6	16473.562	54.70	74.0	19.30	Peak	192.00	300	Vertical	Pass
6**	16473.562	44.41	54.0	9.59	AV	192.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.300	46.12	74.0	27.88	Peak	10.00	300	Horizontal	Pass
1**	1441.300	34.00	54.0	20.00	AV	10.00	300	Horizontal	Pass
2	2449.300	94.63	74.0	-20.63	Peak	360.00	150	Horizontal	N/A
2**	2449.300	87.46	54.0	-33.46	AV	360.00	150	Horizontal	N/A
3	4975.600	52.53	74.0	21.47	Peak	42.00	150	Horizontal	Pass
3**	4975.600	42.19	54.0	11.81	AV	42.00	150	Horizontal	Pass
4	6993.400	55.80	74.0	18.20	Peak	356.00	200	Horizontal	Pass
4**	6993.400	46.76	54.0	7.24	AV	356.00	200	Horizontal	Pass
5	11512.600	51.42	74.0	22.58	Peak	27.00	100	Horizontal	Pass
5**	11512.600	41.31	54.0	12.69	AV	27.00	100	Horizontal	Pass
6	17460.562	54.78	74.0	19.22	Peak	351.00	400	Horizontal	Pass
6**	17460.562	45.77	54.0	8.23	AV	351.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.300	42.29	74.0	31.71	Peak	184.00	300	Vertical	Pass
1**	1329.300	32.37	54.0	21.63	AV	184.00	300	Vertical	Pass
2	2454.400	106.57	74.0	-32.57	Peak	131.00	100	Vertical	N/A
2**	2454.400	97.46	54.0	-43.46	AV	131.00	100	Vertical	N/A
3	4990.000	51.59	74.0	22.41	Peak	109.00	100	Vertical	Pass
3**	4990.000	42.60	54.0	11.40	AV	109.00	100	Vertical	Pass
4	6992.600	55.65	74.0	18.35	Peak	336.00	300	Vertical	Pass
4**	6992.600	48.03	54.0	5.97	AV	336.00	300	Vertical	Pass
5	10923.225	51.98	74.0	22.02	Peak	9.00	100	Vertical	Pass
5**	10923.225	41.37	54.0	12.63	AV	9.00	100	Vertical	Pass
6	16220.250	54.75	74.0	19.25	Peak	271.00	400	Vertical	Pass
6**	16220.250	44.08	54.0	9.92	AV	271.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11ax20(SU) Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.400	45.28	74.0	28.72	Peak	56.00	200	Horizontal	Pass
1**	1442.400	33.89	54.0	20.11	AV	56.00	200	Horizontal	Pass
2	2415.900	100.13	74.0	-26.13	Peak	4.00	200	Horizontal	N/A
2**	2415.900	91.03	54.0	-37.03	AV	4.00	200	Horizontal	N/A
3	4973.600	51.95	74.0	22.05	Peak	258.00	200	Horizontal	Pass
3**	4973.600	42.49	54.0	11.51	AV	258.00	200	Horizontal	Pass
4	6987.200	55.32	74.0	18.68	Peak	248.00	400	Horizontal	Pass
4**	6987.200	46.71	54.0	7.29	AV	248.00	400	Horizontal	Pass
5	12827.175	51.14	74.0	22.86	Peak	227.00	100	Horizontal	Pass
5**	12827.175	41.96	54.0	12.04	AV	227.00	100	Horizontal	Pass
6	16465.688	54.66	74.0	19.34	Peak	89.00	200	Horizontal	Pass
6**	16465.688	44.22	54.0	9.78	AV	89.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V802.11ax20(SU) Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1161.000	48.84	74.0	25.16	Peak	89.00	400	Vertical	Pass
1**	1161.000	37.68	54.0	16.32	AV	89.00	400	Vertical	Pass
2	2403.700	110.74	74.0	-36.74	Peak	297.00	150	Vertical	N/A
2**	2403.700	100.33	54.0	-46.33	AV	297.00	150	Vertical	N/A
3	4990.000	51.01	74.0	22.99	Peak	360.00	100	Vertical	Pass
3**	4990.000	42.14	54.0	11.86	AV	360.00	100	Vertical	Pass
4	6989.400	54.82	74.0	19.18	Peak	294.00	100	Vertical	Pass
4**	6989.400	46.87	54.0	7.13	AV	294.00	100	Vertical	Pass
5	11950.463	51.62	74.0	22.38	Peak	322.00	100	Vertical	Pass
5**	11950.463	41.88	54.0	12.12	AV	322.00	100	Vertical	Pass
6	17329.052	54.99	74.0	19.01	Peak	28.00	200	Vertical	Pass
6**	17329.052	45.72	54.0	8.28	AV	28.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11ax20(SU) Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.800	46.14	74.0	27.86	Peak	49.00	400	Horizontal	Pass
1**	1441.800	33.81	54.0	20.19	AV	49.00	400	Horizontal	Pass
2	2434.600	100.19	74.0	-26.19	Peak	16.00	200	Horizontal	N/A
2**	2434.600	90.04	54.0	-36.04	AV	16.00	200	Horizontal	N/A
3	4981.200	51.62	74.0	22.38	Peak	341.00	200	Horizontal	Pass
3**	4981.200	42.89	54.0	11.11	AV	341.00	200	Horizontal	Pass
4	6805.600	55.01	74.0	18.99	Peak	228.00	200	Horizontal	Pass
4**	6805.600	45.96	54.0	8.04	AV	228.00	200	Horizontal	Pass
5	12938.213	51.42	74.0	22.58	Peak	48.00	300	Horizontal	Pass
5**	12938.213	41.41	54.0	12.59	AV	48.00	300	Horizontal	Pass
6	17420.663	54.72	74.0	19.28	Peak	324.00	100	Horizontal	Pass
6**	17420.663	46.01	54.0	7.99	AV	324.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11ax20(SU) Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1162.900	50.22	74.0	23.78	Peak	78.00	400	Vertical	Pass
1**	1162.900	38.46	54.0	15.54	AV	78.00	400	Vertical	Pass
2	2434.700	109.22	74.0	-35.22	Peak	143.00	100	Vertical	N/A
2**	2434.700	100.57	54.0	-46.57	AV	143.00	100	Vertical	N/A
3	4985.600	51.13	74.0	22.87	Peak	23.00	100	Vertical	Pass
3**	4985.600	42.03	54.0	11.97	AV	23.00	100	Vertical	Pass
4	6987.400	54.92	74.0	19.08	Peak	285.00	300	Vertical	Pass
4**	6987.400	47.26	54.0	6.74	AV	285.00	300	Vertical	Pass
5	12571.750	51.36	74.0	22.64	Peak	31.00	300	Vertical	Pass
5**	12571.750	41.97	54.0	12.03	AV	31.00	300	Vertical	Pass
6	16858.912	55.62	74.0	18.38	Peak	245.00	400	Vertical	Pass
6**	16858.912	45.56	54.0	8.44	AV	245.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H802.11ax20(SU) High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.400	46.13	74.0	27.87	Peak	55.00	300	Horizontal	Pass
1**	1442.400	34.11	54.0	19.89	AV	55.00	300	Horizontal	Pass
2	2465.600	97.84	74.0	-23.84	Peak	43.00	150	Horizontal	N/A
2**	2465.600	87.72	54.0	-33.72	AV	43.00	150	Horizontal	N/A
3	4805.600	51.58	74.0	22.42	Peak	360.00	150	Horizontal	Pass
3**	4805.600	41.94	54.0	12.06	AV	360.00	150	Horizontal	Pass
4	6990.400	55.16	74.0	18.84	Peak	282.00	300	Horizontal	Pass
4**	6990.400	46.36	54.0	7.64	AV	282.00	300	Horizontal	Pass
5	11323.425	51.78	74.0	22.22	Peak	342.00	400	Horizontal	Pass
5**	11323.425	42.21	54.0	11.79	AV	342.00	400	Horizontal	Pass
6	17424.599	55.31	74.0	18.69	Peak	146.00	400	Horizontal	Pass
6**	17424.599	45.51	54.0	8.49	AV	146.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11ax20(SU) High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1162.200	50.16	74.0	23.84	Peak	78.00	100	Vertical	Pass
1**	1162.200	42.11	54.0	11.89	AV	78.00	100	Vertical	Pass
2	2461.100	109.00	74.0	-35.00	Peak	360.00	100	Vertical	N/A
2**	2461.100	100.01	54.0	-46.01	AV	360.00	100	Vertical	N/A
3	4981.600	51.41	74.0	22.59	Peak	341.00	200	Vertical	Pass
3**	4981.600	43.08	54.0	10.92	AV	341.00	200	Vertical	Pass
4	6980.000	56.17	74.0	17.83	Peak	78.00	400	Vertical	Pass
4**	6980.000	46.56	54.0	7.44	AV	78.00	400	Vertical	Pass
5	12436.338	51.29	74.0	22.71	Peak	238.00	300	Vertical	Pass
5**	12436.338	41.53	54.0	12.47	AV	238.00	300	Vertical	Pass
6	16869.412	54.74	74.0	19.26	Peak	168.00	100	Vertical	Pass
6**	16869.412	44.84	54.0	9.16	AV	168.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11ax40(SU) Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1438.800	45.80	74.0	28.20	Peak	55.00	400	Horizontal	Pass
1**	1438.800	33.51	54.0	20.49	AV	55.00	400	Horizontal	Pass
2	2410.800	98.53	74.0	-24.53	Peak	50.00	200	Horizontal	N/A
2**	2410.800	87.04	54.0	-33.04	AV	50.00	200	Horizontal	N/A
3	4809.200	51.27	74.0	22.73	Peak	360.00	200	Horizontal	Pass
3**	4809.200	42.46	54.0	11.54	AV	360.00	200	Horizontal	Pass
4	6989.400	55.70	74.0	18.30	Peak	32.00	200	Horizontal	Pass
4**	6989.400	46.91	54.0	7.09	AV	32.00	200	Horizontal	Pass
5	10922.075	51.67	74.0	22.33	Peak	237.00	400	Horizontal	Pass
5**	10922.075	42.38	54.0	11.62	AV	237.00	400	Horizontal	Pass
6	16828.988	54.58	74.0	19.42	Peak	202.00	100	Horizontal	Pass
6**	16828.988	45.62	54.0	8.38	AV	202.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11ax40(SU) Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1161.200	49.43	74.0	24.57	Peak	77.00	100	Vertical	Pass
1**	1161.200	33.34	54.0	20.66	AV	77.00	100	Vertical	Pass
2	2413.300	106.90	74.0	-32.90	Peak	0.00	100	Vertical	N/A
2**	2413.300	98.01	54.0	-44.01	AV	0.00	100	Vertical	N/A
3	4981.400	51.61	74.0	22.39	Peak	135.00	100	Vertical	Pass
3**	4981.400	43.29	54.0	10.71	AV	135.00	100	Vertical	Pass
4	6993.200	55.84	74.0	18.16	Peak	123.00	300	Vertical	Pass
4**	6993.200	47.67	54.0	6.33	AV	123.00	300	Vertical	Pass
5	12859.463	51.68	74.0	22.32	Peak	184.00	300	Vertical	Pass
5**	12859.463	42.45	54.0	11.55	AV	184.00	300	Vertical	Pass
6	15975.599	54.63	74.0	19.37	Peak	163.00	300	Vertical	Pass
6**	15975.599	44.12	54.0	9.88	AV	163.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11ax40(SU) Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1441.900	46.42	74.0	27.58	Peak	50.00	200	Horizontal	Pass
1**	1441.900	34.39	54.0	19.61	AV	50.00	200	Horizontal	Pass
2	2426.100	96.04	74.0	-22.04	Peak	50.00	200	Horizontal	N/A
2**	2426.100	85.80	54.0	-31.80	AV	50.00	200	Horizontal	N/A
3	4652.800	51.01	74.0	22.99	Peak	189.00	200	Horizontal	Pass
3**	4652.800	40.64	54.0	13.36	AV	189.00	200	Horizontal	Pass
4	6995.000	54.72	74.0	19.28	Peak	258.00	100	Horizontal	Pass
4**	6995.000	46.07	54.0	7.93	AV	258.00	100	Horizontal	Pass
5	12827.700	51.15	74.0	22.85	Peak	203.00	200	Horizontal	Pass
5**	12827.700	42.46	54.0	11.54	AV	203.00	200	Horizontal	Pass
6	16485.637	54.75	74.0	19.25	Peak	25.00	100	Horizontal	Pass
6**	16485.637	44.86	54.0	9.14	AV	25.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11ax40(SU) Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1163.900	49.25	74.0	24.75	Peak	98.00	100	Vertical	Pass
1**	1163.900	37.93	54.0	16.07	AV	98.00	100	Vertical	Pass
2	2428.500	105.64	74.0	-31.64	Peak	360.00	200	Vertical	N/A
2**	2428.500	96.69	54.0	-42.69	AV	360.00	200	Vertical	N/A
3	4889.600	51.64	74.0	22.36	Peak	283.00	200	Vertical	Pass
3**	4889.600	42.46	54.0	11.54	AV	283.00	200	Vertical	Pass
4	6989.400	54.89	74.0	19.11	Peak	249.00	150	Vertical	Pass
4**	6989.400	46.62	54.0	7.38	AV	249.00	150	Vertical	Pass
5	12834.787	50.76	74.0	23.24	Peak	244.00	300	Vertical	Pass
5**	12834.787	41.79	54.0	12.21	AV	244.00	300	Vertical	Pass
6	17425.388	55.07	74.0	18.93	Peak	324.00	400	Vertical	Pass
6**	17425.388	45.69	54.0	8.31	AV	324.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11ax40(SU) High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.400	45.70	74.0	28.30	Peak	56.00	400	Horizontal	Pass
1**	1440.400	33.48	54.0	20.52	AV	56.00	400	Horizontal	Pass
2	2443.300	95.52	74.0	-21.52	Peak	15.00	100	Horizontal	N/A
2**	2443.300	86.35	54.0	-32.35	AV	15.00	100	Horizontal	N/A
3	4882.400	51.26	74.0	22.74	Peak	250.00	100	Horizontal	Pass
3**	4882.400	42.45	54.0	11.55	AV	250.00	100	Horizontal	Pass
4	6987.200	54.70	74.0	19.30	Peak	168.00	300	Horizontal	Pass
4**	6987.200	46.41	54.0	7.59	AV	168.00	300	Horizontal	Pass
5	12403.276	51.09	74.0	22.91	Peak	289.00	200	Horizontal	Pass
5**	12403.276	41.14	54.0	12.86	AV	289.00	200	Horizontal	Pass
6	15685.276	54.71	74.0	19.29	Peak	322.00	100	Horizontal	Pass
6**	15685.276	45.89	54.0	8.11	AV	322.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11ax40(SU) High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1163.700	49.19	74.0	24.81	Peak	87.00	200	Vertical	Pass
1**	1163.700	35.56	54.0	18.44	AV	87.00	200	Vertical	Pass
2	2443.300	106.27	74.0	-32.27	Peak	148.00	200	Vertical	N/A
2**	2443.300	97.80	54.0	-43.80	AV	148.00	200	Vertical	N/A
3	4979.600	51.69	74.0	22.31	Peak	330.00	100	Vertical	Pass
3**	4979.600	42.44	54.0	11.56	AV	330.00	100	Vertical	Pass
4	6994.200	55.51	74.0	18.49	Peak	101.00	100	Vertical	Pass
4**	6994.200	46.75	54.0	7.25	AV	101.00	100	Vertical	Pass
5	12967.088	51.44	74.0	22.56	Peak	343.00	100	Vertical	Pass
5**	12967.088	41.48	54.0	12.52	AV	343.00	100	Vertical	Pass
6	17465.813	55.08	74.0	18.92	Peak	224.00	200	Vertical	Pass
6**	17465.813	45.59	54.0	8.41	AV	224.00	200	Vertical	Pass

5.8 Band Edge (Restricted-band band-edge)

5.8.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.8.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

5.8.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

For transmitters operating above 1 GHz repeat the measurement with an average detector.

5.8.4 Test Result

Note 1: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

Note 2: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note 3: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Test Data

802.11b LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.800	64.16	74.0	9.84	Peak	133.00	100	Vertical	Pass
1**	2389.800	50.31	54.0	3.69	AV	133.00	100	Vertical	Pass
2	2389.950	60.08	74.0	13.92	Peak	38.00	200	Vertical	Pass
2**	2389.950	49.77	54.0	4.23	AV	38.00	200	Vertical	Pass
3	2385.250	59.19	74.0	14.81	Peak	360.00	150	Vertical	Pass
3**	2385.250	50.79	54.0	3.21	AV	360.00	150	Vertical	Pass

802.11b HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.530	59.03	74.0	14.97	Peak	360.00	150	Vertical	Pass
1**	2483.530	49.06	54.0	4.94	AV	360.00	150	Vertical	Pass
2	2483.770	62.69	74.0	11.31	Peak	137.00	150	Vertical	Pass
2**	2483.770	48.67	54.0	5.33	AV	137.00	150	Vertical	Pass
3	2483.725	59.74	74.0	14.26	Peak	94.00	150	Vertical	Pass
3**	2483.725	49.76	54.0	4.24	AV	94.00	150	Vertical	Pass

802.11g LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2384.500	61.21	74.0	12.79	Peak	131.00	150	Vertical	Pass
1**	2384.500	49.03	54.0	4.97	AV	131.00	150	Vertical	Pass
2	2389.950	58.63	74.0	15.37	Peak	137.00	100	Vertical	Pass
2**	2389.950	49.74	54.0	4.26	AV	137.00	100	Vertical	Pass
3	2389.500	58.54	74.0	15.46	Peak	360.00	150	Vertical	Pass
3**	2389.500	50.52	54.0	3.48	AV	360.00	150	Vertical	Pass

802.11g HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.530	60.26	74.0	13.74	Peak	136.00	100	Vertical	Pass
1**	2483.530	49.16	54.0	4.84	AV	136.00	100	Vertical	Pass
2	2484.310	61.80	74.0	12.20	Peak	142.00	150	Vertical	Pass
2**	2484.310	49.71	54.0	4.29	AV	142.00	150	Vertical	Pass
3	2483.785	58.54	74.0	15.46	Peak	131.00	150	Vertical	Pass
3**	2483.785	50.34	54.0	3.66	AV	131.00	150	Vertical	Pass

802.11n20 LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2387.050	61.56	74.0	12.44	Peak	141.00	100	Vertical	Pass
1**	2387.050	49.75	54.0	4.25	AV	141.00	100	Vertical	Pass
2	2389.950	59.06	74.0	14.94	Peak	83.00	200	Vertical	Pass
2**	2389.950	50.29	54.0	3.71	AV	83.00	200	Vertical	Pass
3	2389.500	60.33	74.0	13.67	Peak	141.00	150	Vertical	Pass
3**	2389.500	50.91	54.0	3.09	AV	141.00	150	Vertical	Pass

802.11n20 HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.560	60.94	74.0	13.06	Peak	81.00	100	Vertical	Pass
1**	2483.560	49.53	54.0	4.47	AV	81.00	100	Vertical	Pass
2	2483.770	61.32	74.0	12.68	Peak	137.00	200	Vertical	Pass
2**	2483.770	50.20	54.0	3.80	AV	137.00	200	Vertical	Pass

802.11n40 LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.500	61.43	74.0	12.57	Peak	142.00	100	Vertical	Pass
1**	2389.500	50.91	54.0	3.09	AV	142.00	100	Vertical	Pass
2	2389.950	59.92	74.0	14.08	Peak	140.00	200	Vertical	Pass
2**	2389.950	49.57	54.0	4.43	AV	140.00	200	Vertical	Pass

802.11n40 HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.530	62.70	74.0	11.30	Peak	148.00	200	Vertical	Pass
1**	2483.530	50.79	54.0	3.21	AV	148.00	200	Vertical	Pass
2	2483.740	62.60	74.0	11.40	Peak	145.00	150	Vertical	Pass
2**	2483.740	50.40	54.0	3.60	AV	145.00	150	Vertical	Pass

802.11ax20(SU) LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2388.300	60.77	74.0	13.23	Peak	80.00	150	Vertical	Pass
1**	2388.300	50.44	54.0	3.56	AV	80.00	150	Vertical	Pass
2	2389.950	59.64	74.0	14.36	Peak	283.00	150	Vertical	Pass
2**	2389.950	50.39	54.0	3.61	AV	283.00	150	Vertical	Pass
3	2388.700	59.63	74.0	14.37	Peak	136.00	150	Vertical	Pass
3**	2388.700	50.83	54.0	3.17	AV	136.00	150	Vertical	Pass

802.11ax20(SU) HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	61.05	74.0	12.95	Peak	141.00	100	Vertical	Pass
1**	2483.515	49.16	54.0	4.84	AV	141.00	100	Vertical	Pass
2	2484.565	63.85	74.0	10.15	Peak	145.00	100	Vertical	Pass
2**	2484.565	49.39	54.0	4.61	AV	145.00	100	Vertical	Pass
3	2484.790	59.96	74.0	14.04	Peak	139.00	150	Vertical	Pass
3**	2484.790	50.16	54.0	3.84	AV	139.00	150	Vertical	Pass

802.11ax40(SU) LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2386.750	62.48	74.0	11.52	Peak	141.00	100	Vertical	Pass
1**	2386.750	48.54	54.0	5.46	AV	141.00	100	Vertical	Pass
2	2389.950	58.80	74.0	15.20	Peak	90.00	150	Vertical	Pass
2**	2389.950	48.48	54.0	5.52	AV	90.00	150	Vertical	Pass
3	2387.900	59.53	74.0	14.47	Peak	62.00	150	Vertical	Pass
3**	2387.900	49.78	54.0	4.22	AV	62.00	150	Vertical	Pass

802.11ax40(SU) HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	60.10	74.0	13.90	Peak	137.00	100	Vertical	Pass
1**	2483.515	49.88	54.0	4.12	AV	137.00	100	Vertical	Pass
2	2483.770	60.09	74.0	13.91	Peak	140.00	100	Vertical	Pass
2**	2483.770	49.79	54.0	4.21	AV	140.00	100	Vertical	Pass
3	2483.755	59.39	74.0	14.61	Peak	147.00	150	Vertical	Pass
3**	2483.755	50.70	54.0	3.30	AV	147.00	150	Vertical	Pass

5.9 Power Spectral density (PSD)

5.9.1 Limit

FCC §15.247(e)

The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

5.9.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

5.9.3 Test Procedure

Set analyzer center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.

Set the VBW $\geq 3 \text{ RBW}$.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.9.4 Test Result

Test Data

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-10.62	8
Middle	-10.68	8
High	-13.91	8

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-13.25	8
Middle	-12.40	8
High	-16.15	8

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-11.45	8
Middle	-10.86	8
High	-16.94	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-18.38	8
Middle	-15.29	8
High	-21.40	8

802.11ax-20 MHz(SU) Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-12.92	8
Middle	-12.15	8
High	-16.91	8

802.11ax-40 MHz(SU) Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-18.65	8
Middle	-15.58	8
High	-22.13	8

Test Plots

802.11b LOW CHANNEL



802.11b MIDDLE CHANNEL



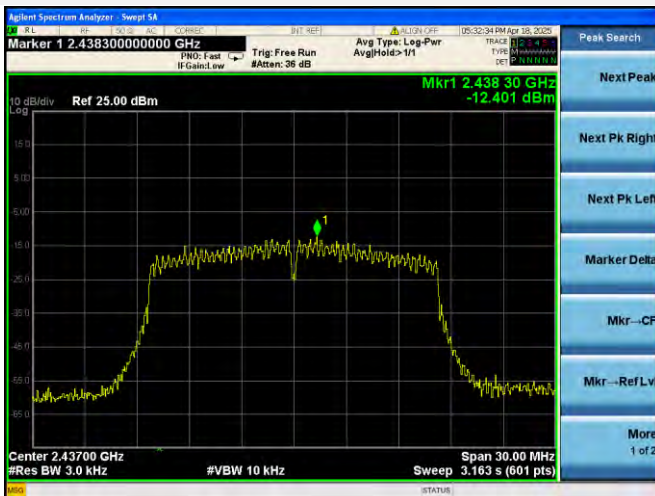
802.11b HIGH CHANNEL



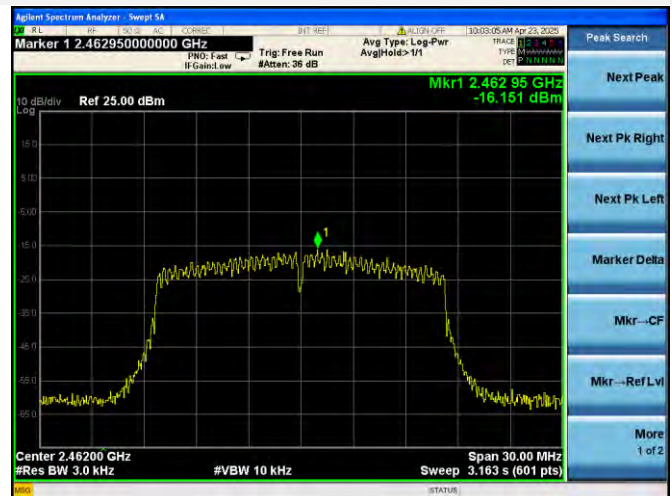
802.11g LOW CHANNEL



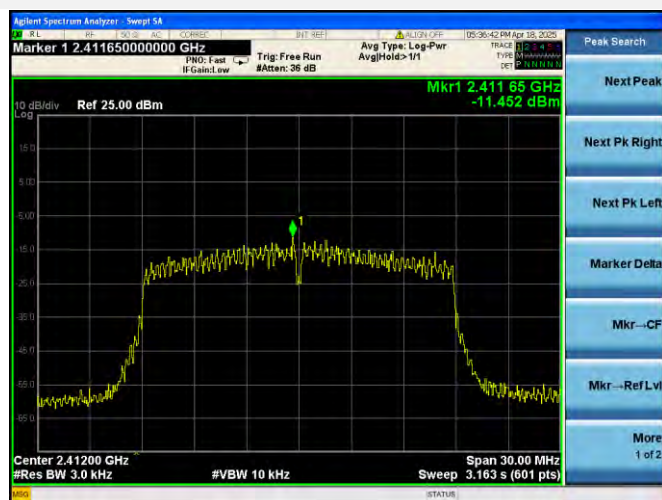
802.11g MIDDLE CHANNEL



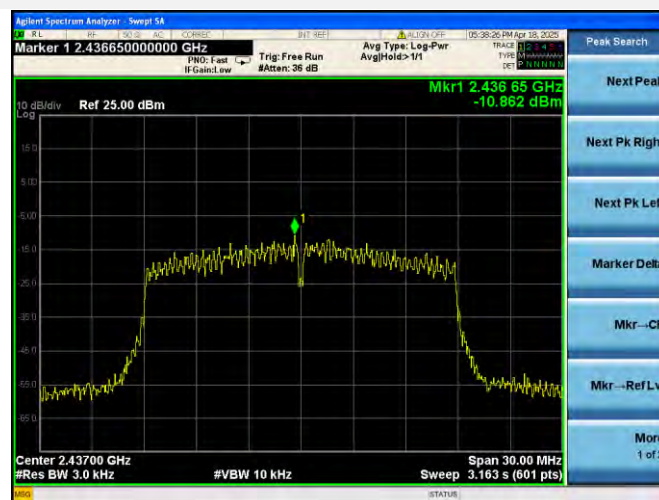
802.11g HIGH CHANNEL



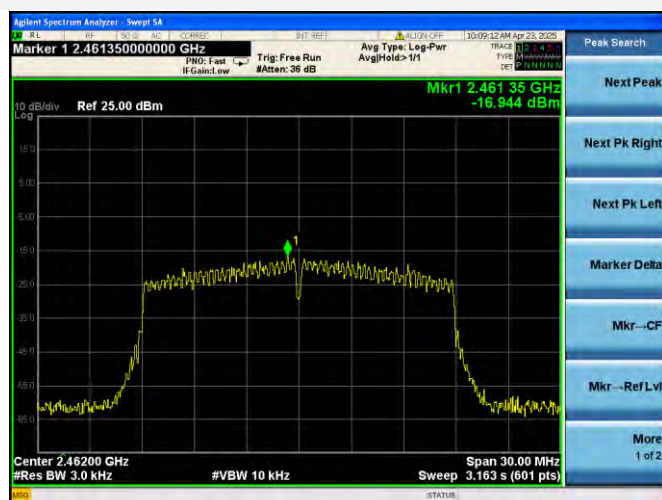
802.11n-20 MHz LOW CHANNEL



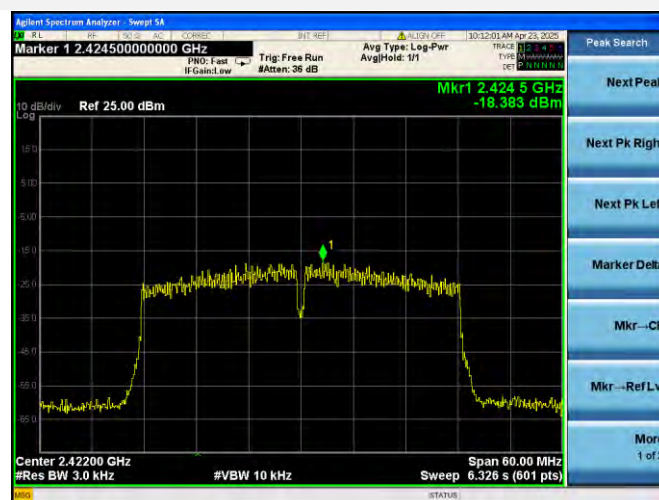
802.11n-20 MHz MIDDLE CHANNEL



802.11n-20 MHz HIGH CHANNEL



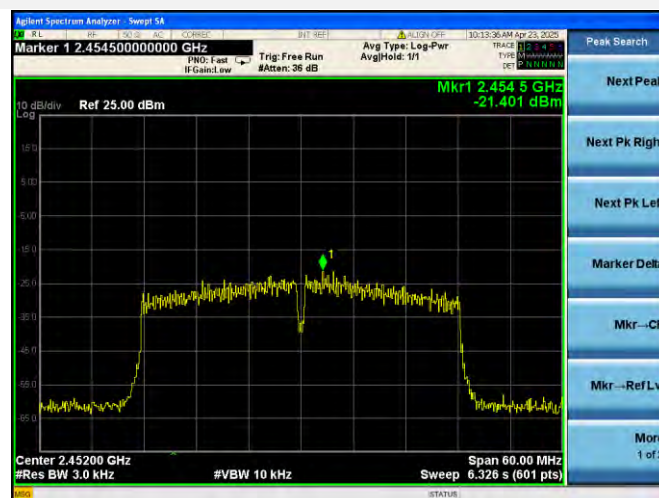
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



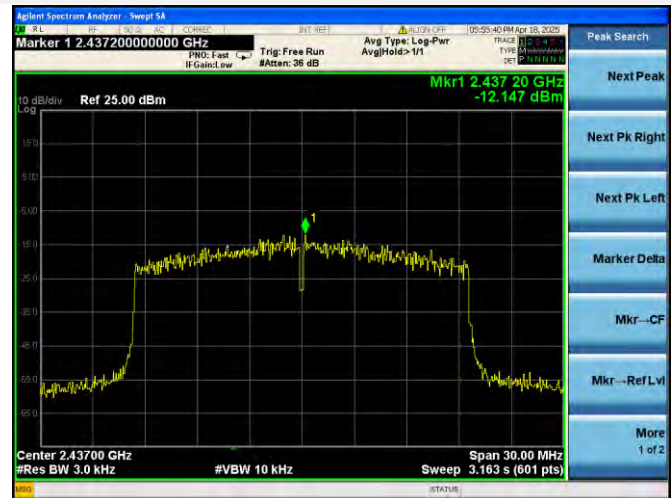
802.11n-40 MHz HIGH CHANNEL



802.11ax-20 MHz(SU) LOW CHANNEL



802.11ax-20 MHz(SU) MIDDLE CHANNEL



802.11ax-20 MHz(SU) HIGH CHANNEL



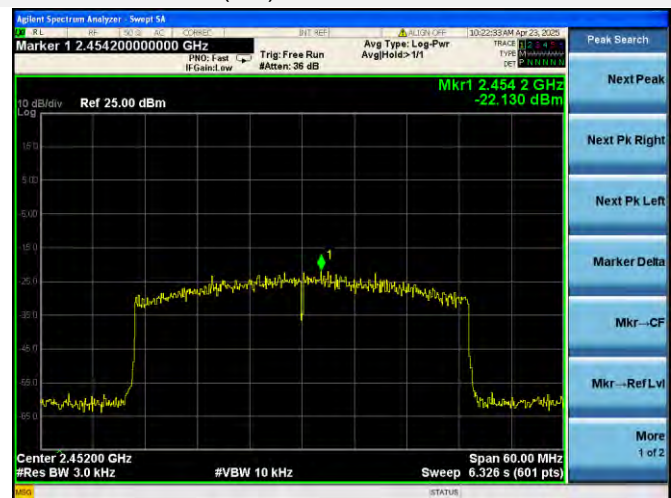
802.11ax-40 MHz(SU) LOW CHANNEL



802.11ax-40 MHz(SU) MIDDLE CHANNEL



802.11ax-40 MHz(SU) HIGH CHANNEL



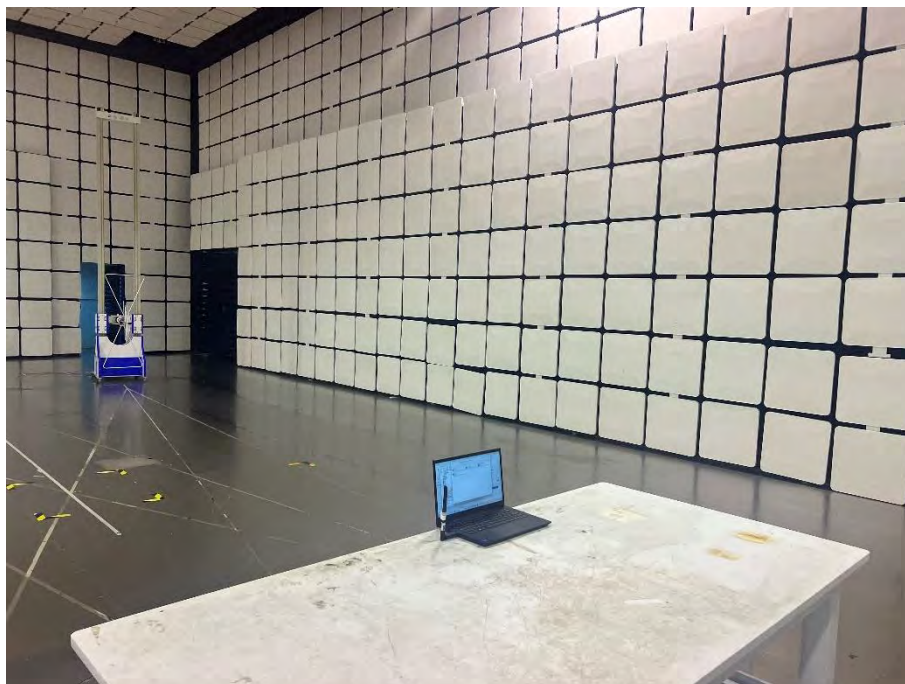
ANNEX A TEST SETUP PHOTOS

1 Radiated Test Photo

Below 30MHz



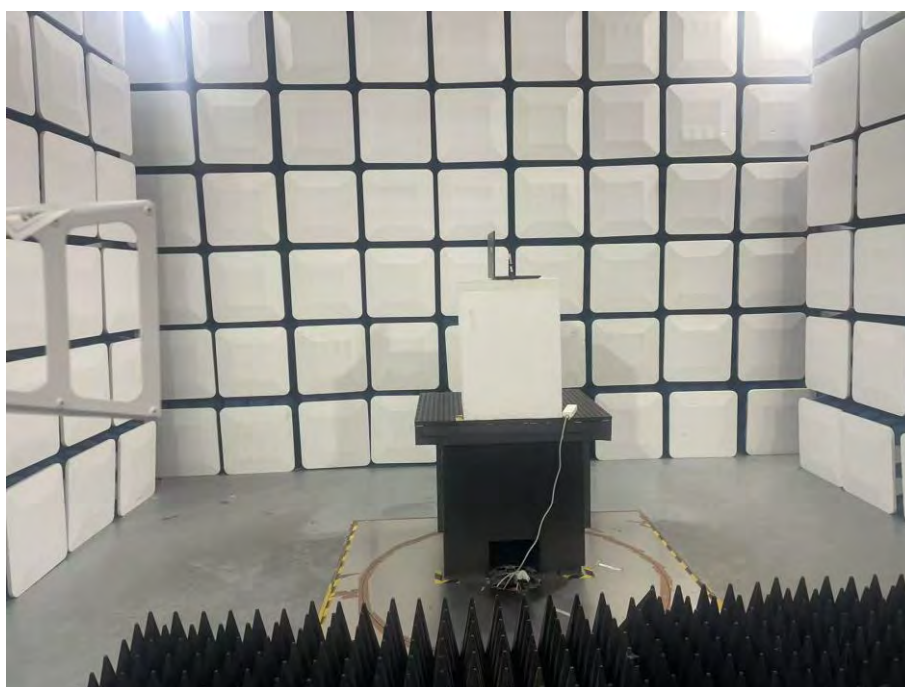
30MHz-1GHz



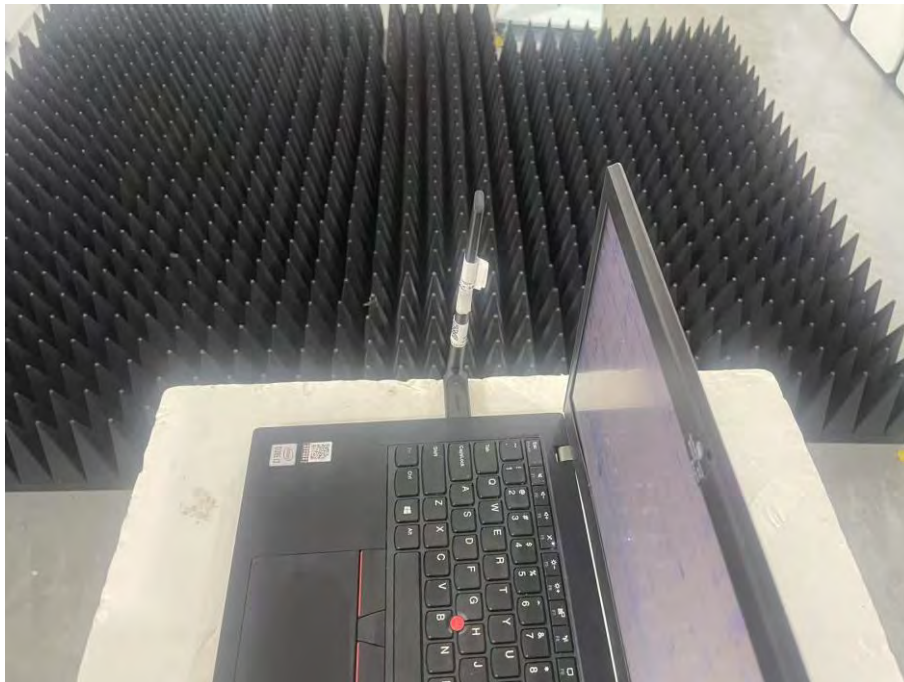
Close-up



Above 1GHz

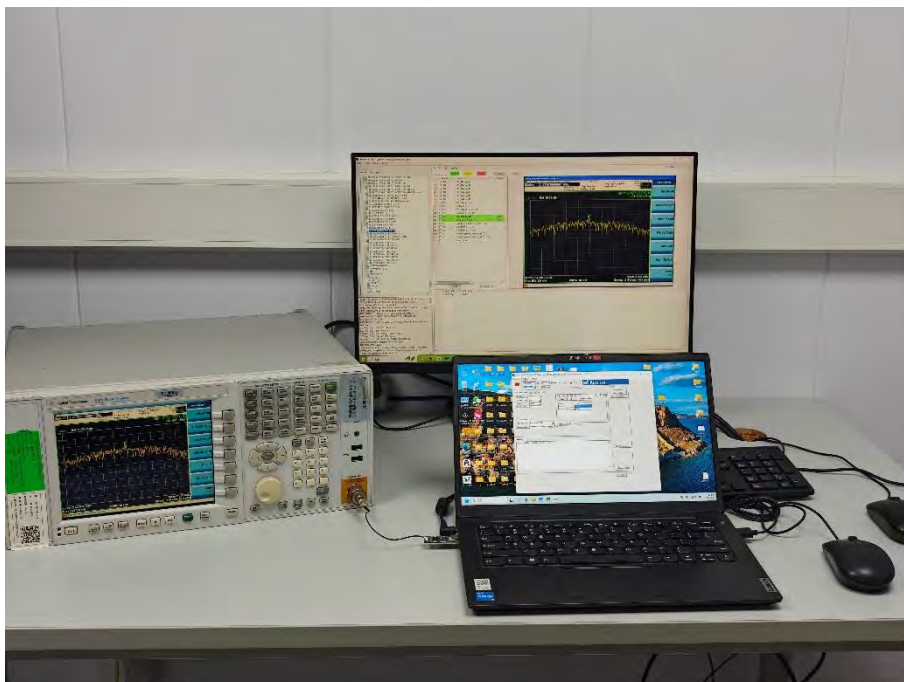


Close-up



2 Conducted Test Photo

Conducted Test



3 Conducted Emission

Photo 1



Photo 2



ANNEX B EUT EXTERNAL PHOTOS

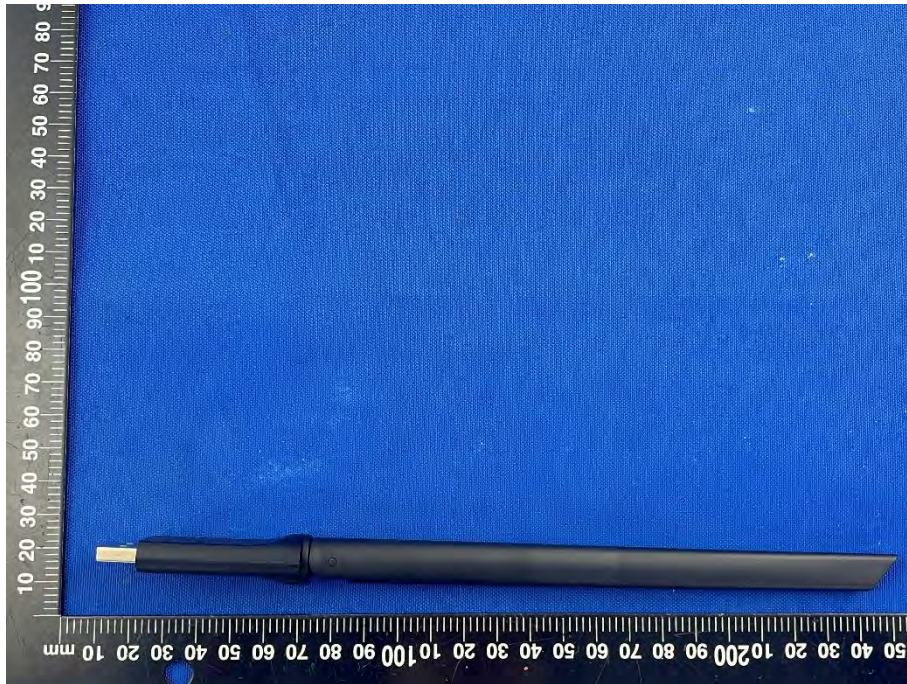
FRONT VIEW OF EUT



REAR VIEW OF EUT



LEFT VIEW OF EUT



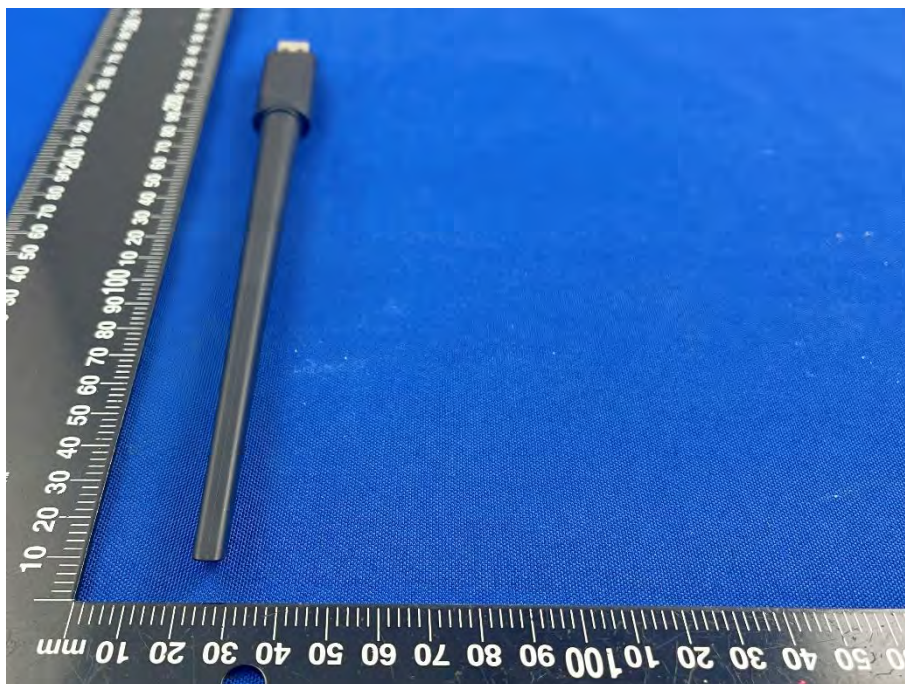
RIGHT VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



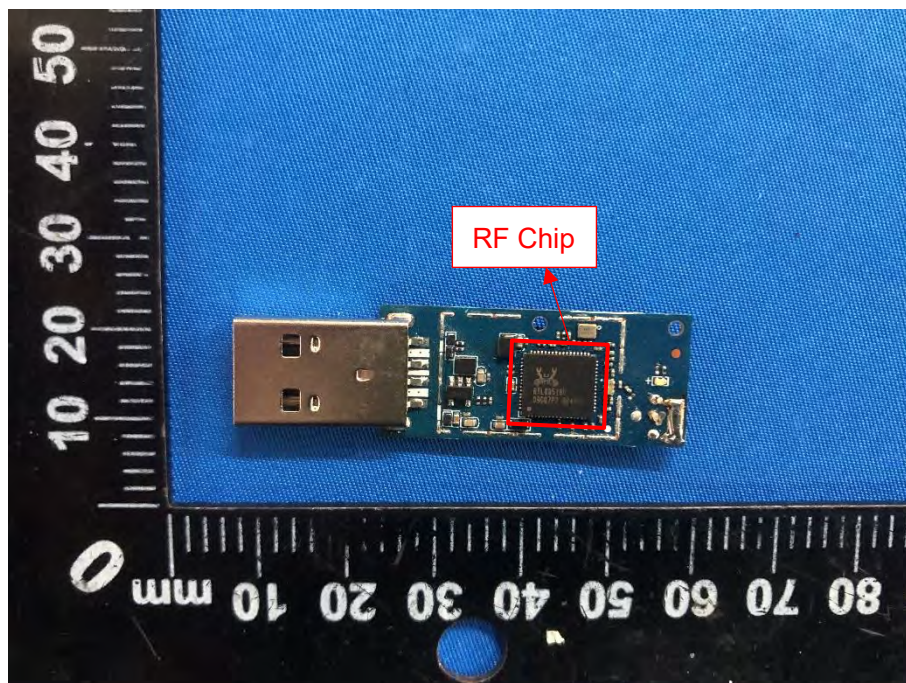


ANNEX C EUT INTERNAL PHOTOS

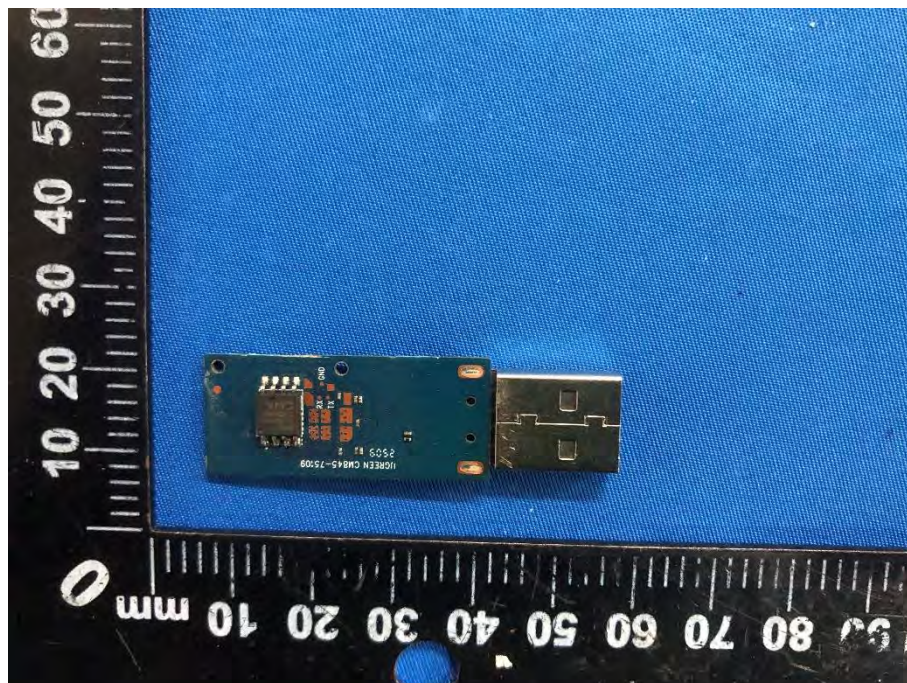
EUT UNCOVER VIEW 1



MAIN BOARD TOP VIEW



MAIN BOARD REAR VIEW



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--END OF REPORT--